REMARKS

First, Applicant highly appreciates the Examiner's careful review of the application, and has corrected the grammatical error incurring in claim 11.

The Examiner rejected claim 1 under 35 U.S.C. 102(b) as being anticipated by Hultmark et al. The Examiner also rejected claims 2-5, 7-12 and 14 under 35 U.S.C. 102(b) as being anticipated by Feenstra. The Examiner further pointed out that claims 6 and 13 would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

In response to the claim rejections, Applicant has cancelled claims 2, 6 and 12-14, and rewritten claims 6, 13 in independent form including all of the limitations of the base claim and intervening claims. Applicant submits new claims 15-19. New claims 15-19 are introduced to conform claims to the embodiments of the present invention as shown in drawings Figs. 1-2 and their equivalents, respectively. Therefore, Applicant asserts that no new matter is added.

With respect to the currently amended claim 1, it is the rewritten independent form of original claim 6, including all of the limitations of the base claim, i.e., original claim 1, and the intervening claim, i.e., claim 2. Therefore, the currently amended claim 1 should be allowable. Claims 3-6 depend on an allowable claim, i.e., currently amended claim 1, and should also be allowable.

With respect to the currently amended claim 7, it is the rewritten independent form of original claim 13, including all of the limitations of the base claim, i.e., original claim 7, and the intervening claim, i.e., claim 12. Therefore, the

currently amended claim 7 should be allowable. Claims 8-11 depend on an allowable claim, i.e., currently amended claim 7, and should also be allowable.

The newly added claim 15 cites a heat dissipation device that comprises "a base and a plurality of individual fins, each of the fins integrally comprising: an engaging part attached to the base, and a hollow post spaced from the engaging part and comprising an inlet and an outlet at opposite ends thereof, one of the inlet and the outlet pointing to the base".

In contrast, the reference cited by the Examiner, Hultmark et al, as understood by Applicant, discloses a cooling fin assembly for mounting on a semiconductor package. In particular, the cooling fin includes a plurality of pins 20 and a cooling fin means 26. The pins 20 "are provided with a head 22 that is brazed or soldered to the ceramic cover 14." Hultmark, col. 3, lines 2-3. "A cooling fin structure 26 is mounted on the pins 20 as illustrated in FIGS. 1 and 2. The cooling fin is comprised of a thin walled cellular material with cells defining elongated openings in side-by-side relation that extend through the material." Hultmark, col. 3, lines 14-18. "The cellular configuration forming the fins is preferably made up of a plurality of six-sided cells having the cross-sectional configuration of a regular hexagon as illustrated most clearly in FIG. 2." Hultmark, col. 3, lines 20-23. "The upper end of pins are inserted into cells in the fin structure 26". Hultmark, col. 3, lines 26-27. Persons skilled in this technology can read from Hultmark that the fin structure 26 is a mass which comprises continuous walls/barriers to define the openings in side-by-side relation. Therefore, Hultmark does **not** disclose or teach "individual fins, each of the fins integrally comprising: an engaging part attached to the base, and a hollow post

spaced from the engaging part".

Further, "The air flow inlets 110 are substantially located near the foundation 106 and are placed at about 90 degree intervals around the circumference of a cylindrical pipe……the air flow inlets 110 are located about 2.5 mm above the base 102 as indicated by dimension 318……located on the edge of the foundation 106." Feenstra, col. 5, lines 2-14. The air flow inlet 110 are above the base 102 as shown in FIGS. 1, 3, and the dimension 318 is defined by the foundation 106. When the top side 112 of the heat sink 100 is oriented vertically, "the air flow inlet 110 is substantially located on the downwardly facing surface 116 of each one of the pipes 104." Feenstra, col. 5, lines 32-34. Apparently, Feenstra discloses that the air flow inlet 110 is defined in the side wall 105 or in the downwardly facing surface 106 near the base 102, but does **not** teach an air flow inlet pointing to the base 102. Apparently, the air flow outlet 108 of Feenstra is opposite to the air flow inlets 110 which are close to the base 102, and does **not** yet point to the base 102.

Viewing from the method of manufacturing the heat sink, Feenstra does **not** yet teach that the air flow inlet 110 is defined to point to the base 102. In one embodiment, "the base 102 and a plurality of solid columns are molded out of extruded aluminum as a single unit. Then, the plurality of air flow inlets 110 are formed by using a drill to remove material from the side wall 105 of each of the solid columns." Feenstra, col. 4, lines 12-16. In this embodiment, the air flow inlet 110 is impossible to point to the base 102. In an alternate embodiment, the "foundation 106 of each one of the plurality of pipes 104 projects *outward* in the shape of a flange 220 or multiple flange portions such as tabs. The foundation

106 and flange or tabs 220 of each one of the plurality of pipes is glued or otherwise attached such as with a thermal conductive glue directly to the module cover. The flange 220 extends from the pipe 104 in a direction parallel to the surface of the module cover". Feenstra, col. 4, lines 40-47. This embodiment merely refers to the modification of the relationship between the pipes 104 and the base 102, that is, the pipes 104 are set onto the base by means of gluing the foundation 106 and flange or tabs 220 projecting outward from the foundation 106, instead of by means of molding out of extruded aluminum.

Additionally, if the location of air flow inlet 110 is changed to point to the base 102 in Feenstra, the pipe 104 especially the foundation 106 must be greatly modified, and the relationship between the foundation 106 and the base 102 must be greatly modified, to conform with the location change of the air flow inlet 110. That is, the whole pattern of the heat sink 100 must present an entirely new appearance. This needs a lot of work.

Because the air flow inlet of Feenstra does not point to the base 102, air outside the pipe 104 enters the pipe 104 in a direction angled to the pipe 104. This is unfavorable for air outside the pipe 104 to fluently enter the pipe 104.

Therefore, neither Hultmark nor Feenstra, taken alone or in combination, suggest or teach a heat dissipation device that comprises "a base and a plurality of individual fins, each of the fins integrally comprising: an engaging part attached to the base, and a hollow post spaced from the engaging part and comprising an inlet and an outlet at opposite ends thereof, one of the inlet and the outlet pointing to the base".

For at least the foregoing reasons, newly added claim 15 should be patentable. Claims 16-20 are dependent from claim 15, and should also be patentable, wherein claim 20 further states each hollow post defines a through hole extending therethrough along the axial direction and exposed to an exterior at two opposite ends in said axial direction, that is different from the hole (110) of Feenstra which extends diametrically/transversely with regard to the tube (104).

In view of the foregoing, the subject application as claimed in the pending claims is in a condition for allowance and an action to such effect is earnestly solicited.

Respectfully submitted,

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